2009/2010 *Good Energy* Rebate Program

Yukon Government's Energy Solutions Centre

Final Report

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Yukon
Energy, Mines and Resources

energy solutions centre

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1. INTRODUCTION

This report details the results of the 2009/2010 *Good Energy* rebate program.

The total electrical energy savings that will result from the purchase of the Energy Star®-rated household and heating appliances through this program amount to approximately $100,000/year or approximately $1,500,000 over the life span of the appliances (based on energy use data published by Energy Star® and the Canadian government's Office of Energy Efficiency).

The reduction in total greenhouse gas emissions estimated to result from this program is approximately 5,650 tonnes/year of CO_2e, or 100,000 CO_2e tonnes over the expected lifespan of these appliances.

Public interest in the program continues to be strong. The 2009/2010 *Good Energy* Rebate Program included residents from 18 Yukon communities. The majority of applicants were from the Whitehorse area; however, the per-capita uptake in communities outside of Whitehorse has increased by approximately 25% from the previous year's program.

Per-capita participation in the program was 4.2% in Whitehorse and 1.9% in communities outside of Whitehorse. While the per-capita ratio of participation outside of Whitehorse has increased from last year, it's still significantly lower than that of Whitehorse. This indicates that there is significant potential for program growth through further marketing efforts in the communities.

The Good Energy program clearly illustrates that there is a high level of public interest in realizing the long-term economic and environmental benefits that result from choosing best-in-class consumer energy technologies.

2. PROGRAM OVERVIEW

One of the fundamental objectives of the Yukon government's Energy Solutions Centre (ESC) is to serve Yukon's energy efficiency needs by:

1. helping to build capacity in energy efficiency related fields; and,
2. educating Yukon residents about the benefits of choosing energy efficient products when making purchases.

In order to help meet these objectives, ESC has provided a number of market transformation programs over the years including: the 2002 Fridge Exchange; 2006 Yukon Project Porchlight; 2006 Reel Mower Rebate; 2006/07 Washer Rebate Program; Seasonal Light Exchange Program; and the 2007/2008 Appliance Rebate Program.

The potential for energy efficiency improvements, and the success of the initiatives mentioned above has encouraged ESC to continue to offer programs focused on transforming the consumer appliance/equipment market to more efficient "best-in-class" technologies.

In 2008, ESC developed a comprehensive rebate program. Branded the *Good Energy* Rebate program, this program focuses on: household appliances (refrigerators, freezers, clothes washers and dish washers); heating appliances (oil/propane furnaces and boilers, woodstoves, heat recovery ventilators (HRV), drain water heat recovery systems (DWHR), and solar water heaters); and boat motors. These appliances make up a significant portion of the energy consumed in the Yukon. Despite this fact, the most recent "Residential Energy End Use Survey" shows that a relatively small number of Yukon households have chosen to invest in high efficiency appliances. The survey also shows that a significant number of Yukon households have appliances that are 10 years or older and will likely require replacements in the near future.

Based on the success of the 2008/2009 *Good Energy* program, the program was carried over into the 2009/2010 fiscal year with some small changes. The 2009/2010 program offered Yukon residents who purchased an Energy Star®-rated clothes washer, dish washer, refrigerator or freezer a $100 rebate ($200 for residents of diesel-powered communities). Similarly, applicants could receive a $300 or $500 rebate for an Energy Star®-rated central heating unit (furnace or boiler); $300 for CSA- approved pellet stoves and EPA-approved woodstoves; $300 for HVI approved HRV's; $500 for CSA-approved solar water heating systems; and $300 or $500 for California Air Resource Board (CARB) 3-star rated boat motors. Applicants were required to supply appropriate proof of purchase along with an

application form and brief program survey. (For more information on applicable rebates and the program Terms and Conditions see Appendix A)

3. PROJECT BUDGET

The cumulative rebate costs of the program are shown in Chart 1 below. The program averaged approximately $618 per calendar day in rebates over the course of 12 months. It is clear from Chart 1 that consumer participation in this program was consistent throughout the year and showed no indications that the market for Energy Efficient products or interest in the program had been saturated.

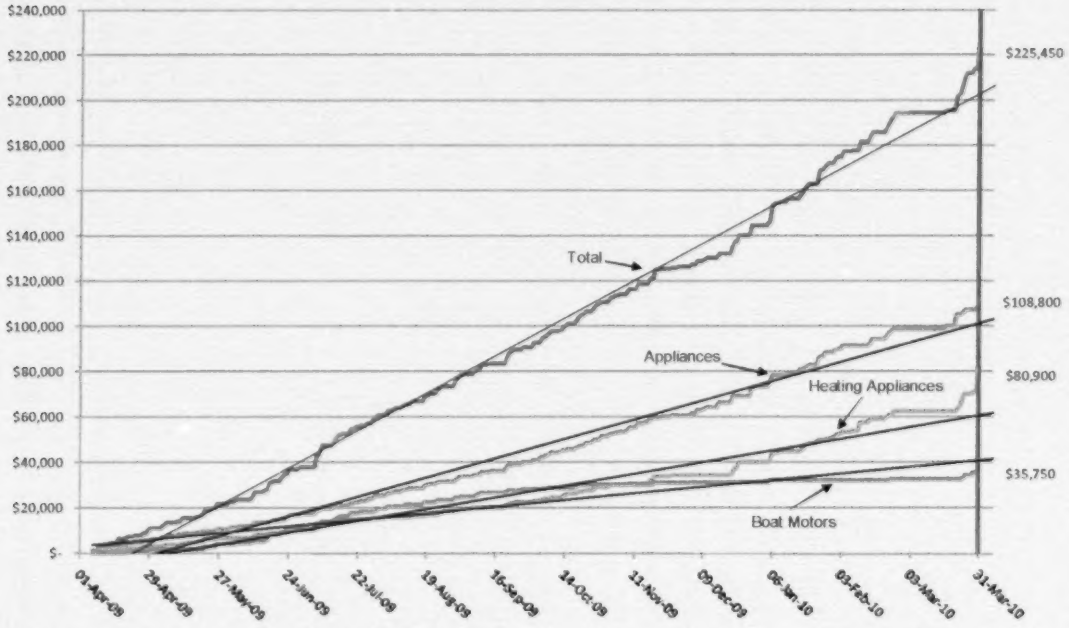


Chart 1: Cumulative Rebate costs

Total rebate costs for the program for fiscal year 2009-10 were $225,450. Total marketing costs for the program were $27,025.53. This includes costs of all advertising (radio, newspaper), development of marketing materials (signs, tags, newspaper ads, website graphics), and development and printing of application forms.

Therefore, total program costs for the fiscal year 2009/2010 were $252,475.50.

4. PROJECT RESULTS

The 2009/2010 *Good Energy* program, which ran from April 1, 2009 to March 31, 2010, had 1,150 successful applicants (approximately 9% of Yukon households) receiving rebates for 1,071 appliances, 211 heating appliances (including 33 HRV's) and 106 boat motors.

These numbers represent an increase over last year's program with an increase in total applications of 30%; an increase in home appliance applications of 30.8%; an increase in boat motor applications of 352%, and a decrease in heating appliance applications of 33%.

While the total number of rebate applications received increased, the rate of applications received was down slightly from the previous year. The 2009/2010 program averaged approximately 3.15 rebates per day over the course of the program, which is a decrease of 11.9% from the previous year.

Chart 2a/2b below shows the distribution of all rebates by appliance for 2009/2010. As in previous years household appliances are the most common rebate applications received, however, boat motors, woodstoves and other heating appliances also make up a significant portion of the rebates.

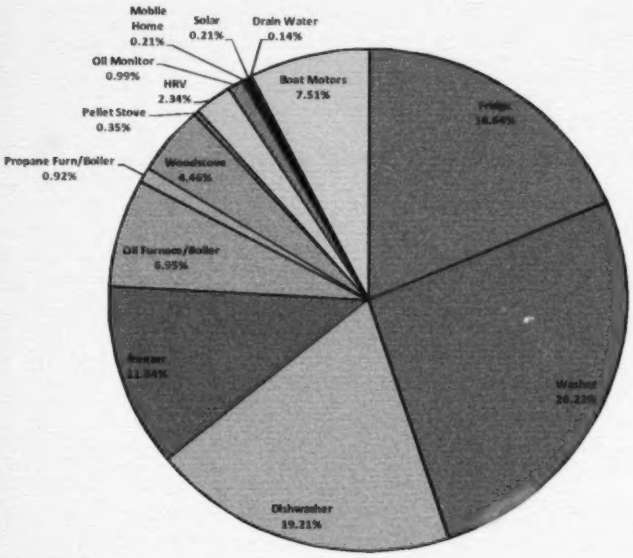


Chart 2a: Distribution of Rebate Applications

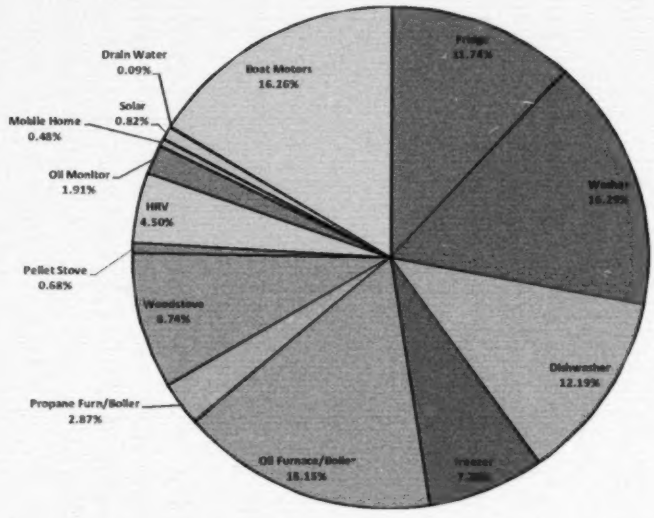


Chart 2a: Distribution of Rebate Dollars

4.1. Home Appliances

1,071 rebates were provided for Energy Star® rated home appliances through this program. The breakdown of appliances is shown in Chart 3 below.

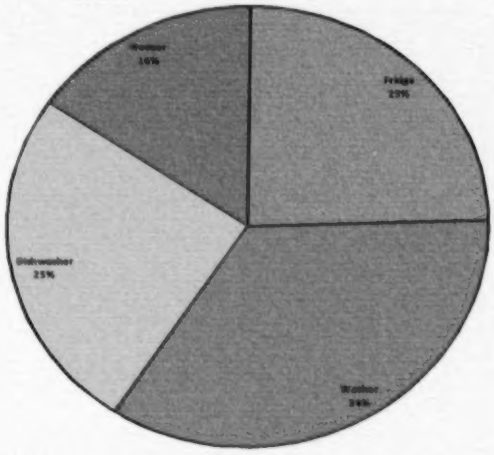


Chart 3: Distribution of Rebate Applications by Appliance

Based on data collected and reported by Energy Star®, and NRCan's Office of Energy Efficiency, the 1,071 Energy Star® rated appliances purchased over the course of this program will result in estimated total energy savings of 400,000 kWh/year, and water savings of approximately 15,000,000 litres/year. The calculation of this data is summarized in Table 1 below.

		Clothes Washers	Dishwashers	Refrigerator	Freezers	Total
Energy Consumption (kwh/year)	Conventional (based on 1990)	1,200	1,026	1,044	658	
	Conventional (new)	887	617	465	344	
	Energy Star	296	452	411	308	
Savings	Min	591	165	54	36	
	Max	904	574	633	350	
	Average	**748**	**370**	**344**	**193**	
Water Use (litres/year)	Conventional (new)	51,335	4,889			
	Energy Star	23,286	3,259			
Savings	**Average**	**37,311**	**4,074**			
Number of Rebates Excepted (Hydro Comm.)		370	271	263	167	1,071
Number of Rebates Excepted (Diesel Comm.)		12	3	5	7	27
Est. Total Energy Savings (kWh/year)		**276,575**	**100,135**	**90,341**	**32,251**	**499,301**
Est. Total Energy Savings in Diesel Communities (kWh/year)		**8,970**	**1,109**	**1,718**	**1,352**	**13,148**
Est. GHG Emmisions Reduction (Diesel Communities Only) (Tonnes CO_{2e})		**7.06**	**0.87**	**1.35**	**1.06**	**10.35**
Est. Total Water Savings (litres/year)		**13,804,885**	**1,104,054**			**14,908,939**

Table 1: Estimated Energy and Water Savings of Rebated Energy Star® Rated Home Appliances

4.1.1. Cost Savings

A total energy savings of approximately 500,000 kWh/year constitutes an electrical bill savings to participating Yukon residents of approximately $50,000 per year, and more than $500,000 over a conservatively estimated 10 year life span of the appliances.

4.1.2. Water Savings

In addition to the aforementioned energy savings, participants in this program who purchased water saving dishwashers and clothes washers are responsible for savings of an estimated 15,000,000 litres of water per year or approximately 150,000,000 litres of water over an estimated 10 year lifespan of the appliances purchased. This represents not only significant savings for consumers, but considerable water savings for municipal governments concerned with the costs of extracting, treating, distributing and disposing of water.

4.1.3. Greenhouse Gas (GHG) Emission

A total of 27 rebates were accepted in Yukon communities which use diesel generators to produce electricity. The increased efficiency of these appliances represents an estimated energy savings of 13,000 kWh/year, which represents an offset of 10.4 tonnes of CO_{2e}.

4.2. Heating Appliances

In 2009/2010 there were 196 successful heating appliance (Oil or Propane Furnace/Boiler/Monitor, Wood Stove, Pellet Stove) applicants.

Of the 196 heating appliances for which rebate applications were received, 35% used renewable energy (wood) as a fuel while the remainder were energy efficient oil and propane appliances.

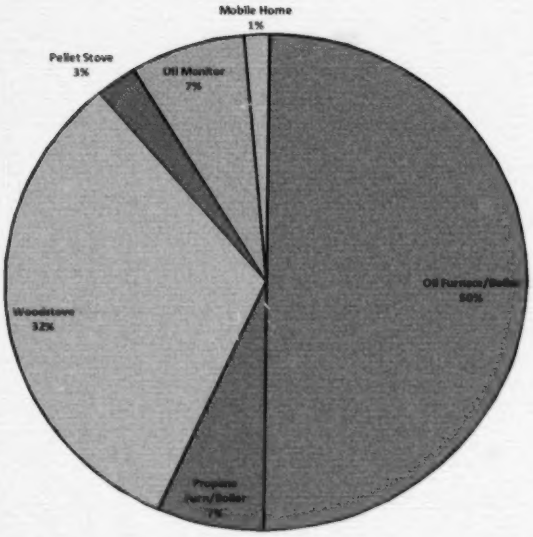


Chart 4a: Distribution of Rebates by Heating Appliances

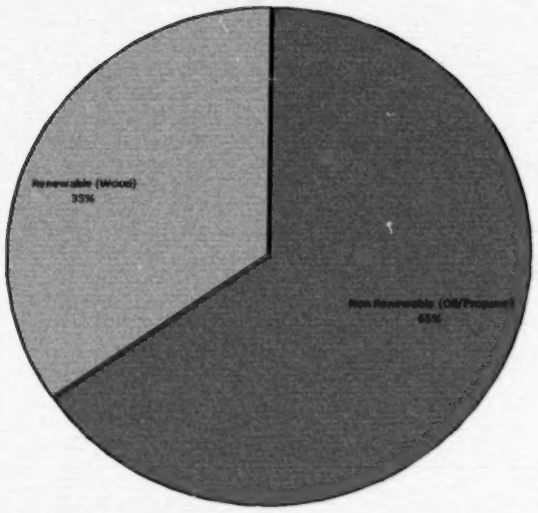


Chart 4a: Renewable vs. non-Renewable Heating Appliance

4.2.1. Energy Star® Furnaces and Boilers

111 applications were approved for the purchase of Energy Star® rated oil/propane furnaces and boilers. These appliances are typically 10-15% more efficient than a new non-Energy Star® model; however, the majority of these installations will replace older existing heating appliances for which the efficiency improvement is likely to be significantly greater than 20%. Assuming a conservative average efficiency increase of 10% and an average household heating load of 100 MBTU/year *(Yukon Housing data, Appendix B),* this is a savings of approximately 400 litres of heating oil per year per household. At the present cost of heating oil, this represents a savings to the individual household of approximately $400/year. For the 111 Yukon residents that received these furnace/boiler rebates, this represents a savings of approximately 45,000 litres of heating fuel and approximately $45,000 in costs savings per year. Over an estimated furnace/boiler lifespan of 20 years this program will produce savings of approximately 900,000 litres of oil and $900,000 for Yukoners over this time period.

Along with benefiting from these cost savings, by choosing Energy Star®, participants in this program are helping to reduce greenhouse gas emissions in the territory. The 45,000 litres of heating fuel saved per year represents approximately 150 tonnes of CO_2e reductions.

4.2.2. Wood and Pellet Stoves:

2009/2010 was the second year that the ESC included EPA-approved woodstoves and CSA-approved pellet stoves in the rebate program. Wood heat has always been a significant contributor to the Yukon's residential heating demand and the pellet stoves and EPA-approved woodstoves represent the most efficient and lowest in terms of particulate emissions of these renewable energy technologies.

At 63 woodstoves and 5 pellet stoves, these wood heat appliances make up 35% of all the heating appliance rebates and 5% of the total rebates for the 2009/2010 program year.

Because wood and pellet-based heating systems are often used as secondary heating systems, it is difficult to accurately quantify the decrease in oil/propane use associated with these purchases; however, if we assume that the applicants who purchased these high efficiency appliances plan to use them to meet 50% of their annual heating load, and we assume an average household heating load of 100 MBTU/year *(Yukon Housing Data, Appendix B),* this number represents an equivalent fuel oil savings of approximately 1,250 litres per year.

For the 68 Yukon residents who received a rebate for wood or pellet stoves, this is a total savings of approximately 85,000 litres of heating fuel per year. Over an estimated wood or pellet stove lifespan of 20 years this represents a savings of approximately 1,700,000 litres.

85,000 litres of heating fuel saved per year corresponds to a reduction of approximately 2,600 tonnes/year of CO_2e and over 50,000 tonnes over the expected 20 year lifespan of these heating appliances.

Quantifying heating cost savings that result from the wood/pellet stove rebate is difficult. Without knowing the future level of use of these wood/pellet stoves as well as whether or not this appliance is replacing another wood/pellet stove or an oil/propane heating device, it is impossible to accurately determine the total cost savings that will be realized in future years by applicants participating in this program. Based on Yukon Housing information (Appendix B), wood/pellet heating can save a home owner from $400-$1,000 per year compared with heating with oil (depending on appliance efficiency). Assuming a savings of

$200/year (50% of the heating load), this represents a potential total savings for all applicants of approximately $14,000/year or $280,000 over the estimated 20 year life span of the appliance.

It can be difficult to quantify the economic benefits that result from switching from hydrocarbon-based heating to renewable heating systems. However, it is worth noting that based on the assumptions made above, each woodstove purchased is likely to consume approximately 3.5 cords of wood per year. At current costs of $230/cord *(Yukon Housing Data, Appendix B),* this represents approximately $800/year or $50,000/year for all the applicants who purchased woodstoves and applied for a rebate from the *Good Energy* program. This represents a significant shift away from imported hydrocarbon based fuels to an investment in the Yukon's local sustainable forest industry.

4.3. Heat Recovery Ventilators (HRVs)

In an energy efficient home, a heat recovery ventilator (HRV) is an essential requirement to ensure an energy efficient means of maintaining indoor air quality. This is the second year that ESC has included HRV's in the rebate program, and with 33 accepted applications, rebates have increased 16% over the previous year.

4.4. Solar Hot Water Heating Systems

ESC received 3 applications for solar hot water heating systems in 2009/2010. This is a significant improvement over the previous year when no applications were received. Solar technology is becoming increasingly cost effective and has significant potential in the Yukon. Solar technology is likely an area in which ESC could do some work in developing capacity and technology promotion to further promote the potential of the sector.

4.5. Outboard Boat Motors

This is the second year that ESC has included CARB 3 star-rated outboard boat motors in the rebate program. The CARB (California Air Resource Board) 3-star rating represents the highest industry standard in low emissions outboard boat motor technology. With 106 applications received between April 1, 2009 and March 31, 2010, applications for these products increased 352% over the previous year.

4.6. Summary of Results

In total the Energy Star®-rated household and heating appliances purchased through this program represent a total savings to Yukoners of approximately $100,000/year or approximately $1,500,000 over the life span of the appliances. This is strictly the estimated costs savings associated with increased energy efficiency of Energy Star® rated appliances based on currently energy costs, and does not account for the significant potential savings associated with predicted increased energy costs for hydrocarbon based energy over the next 20 years.

The reduction in total greenhouse gas emissions estimated to result from this program is approximately 5,650 tonnes/year of CO_2e and 100,000 CO_2e tonnes over the expected lifespan of these appliances.

5. COMMUNITY PARTICIPATION

The 2009/2010 *Good Energy* Rebate Program included residents from 18 Yukon communities. As with participation patterns identified in previous rebate programs, the majority of applicants were from the Whitehorse area. However, the per-capita uptake in communities outside of Whitehorse has increased by approximately 25%.

Whitehorse per-capita participation in the program was 4.2% and 1.9% in communities outside of Whitehorse. While the per-capita ratio of participation outside of Whitehorse has increased from last year, it's still significantly lower than that of Whitehorse. This likely indicates the necessity for further marketing efforts of this program in the communities.

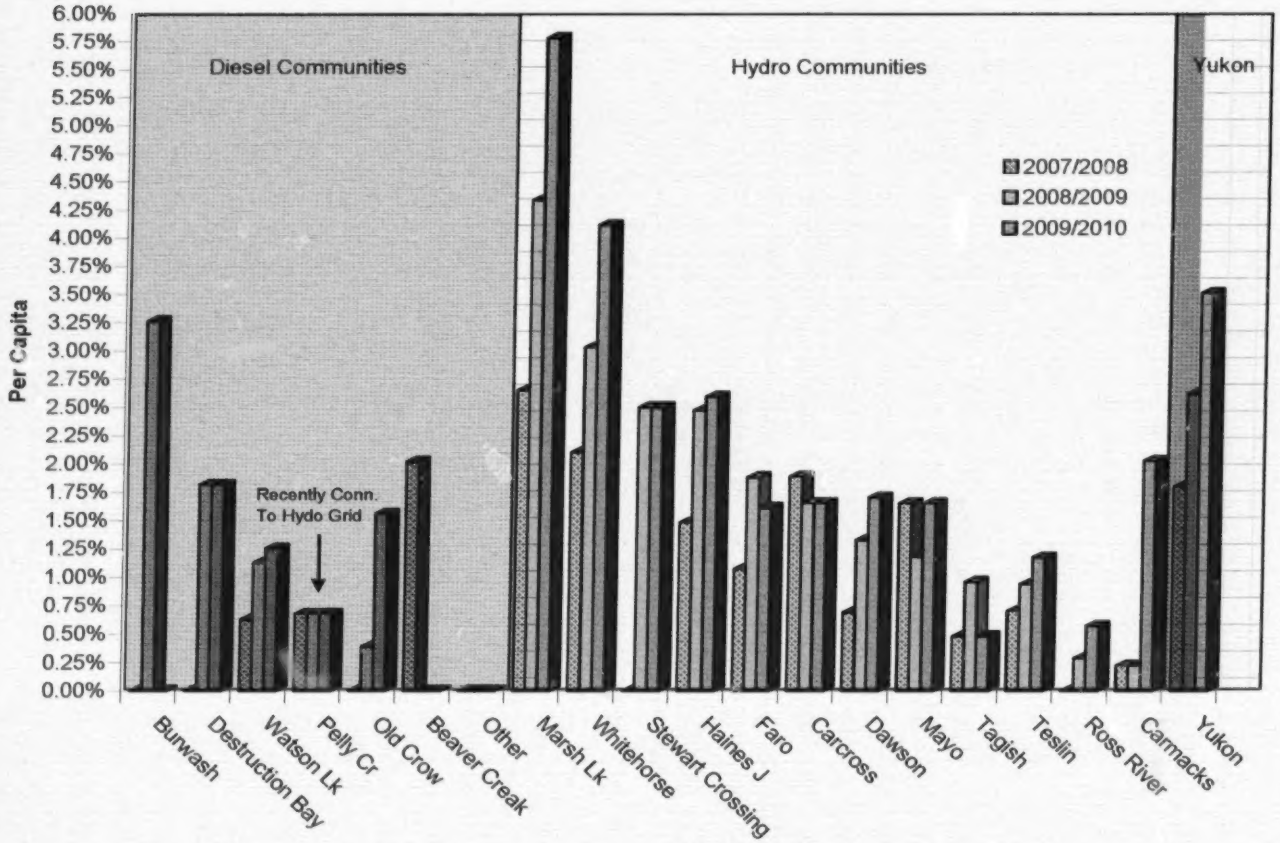


Chart 6: Per-Capita Distribution of Applications by Community

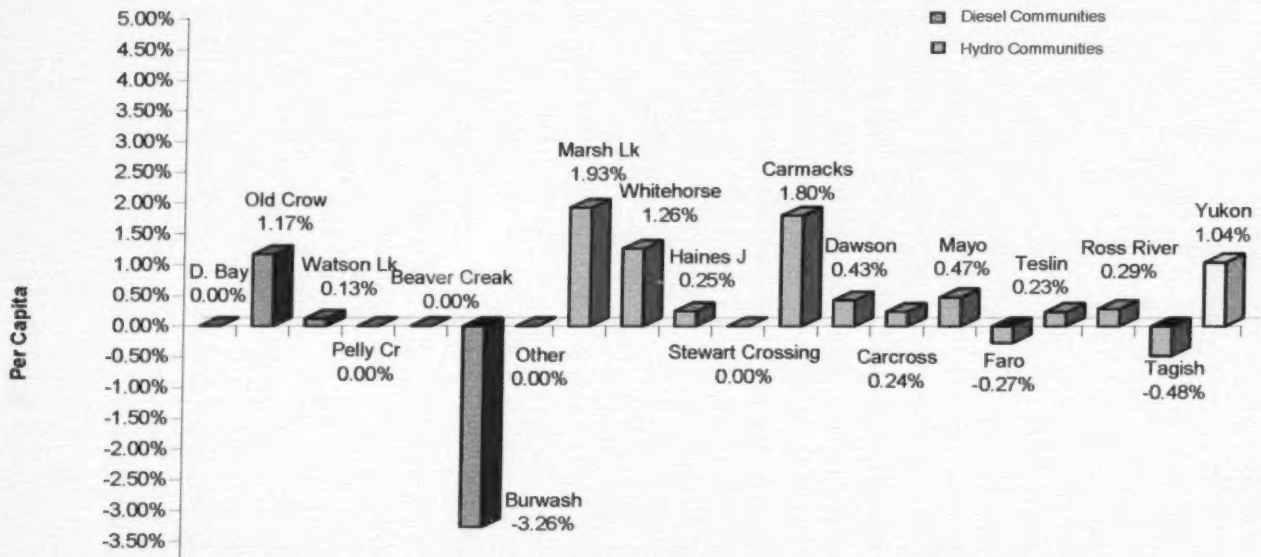


Chart 7: Per-Capita Change in Application Rates from 2008/2009 to 2009/2010 by Community

6. Old Appliances/Products

Each program applicant is asked whether or not the new product being purchased is replacing an old product and if so how old that product was when replaced. Of those respondents, Chart 8 gives the percentage of replacements vs. non-replacement products.

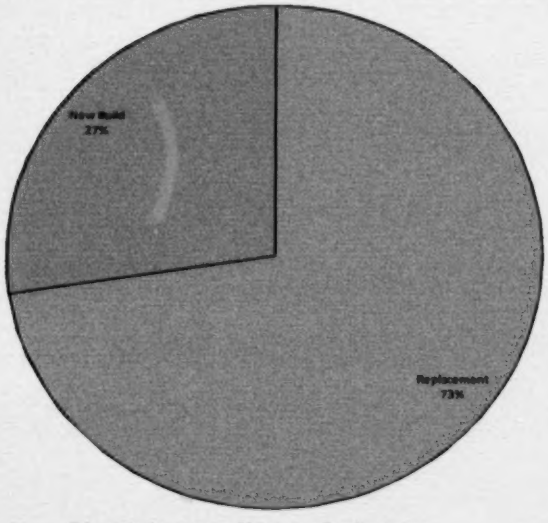


Chart 8a: Appliance Rebates Replacement/New Build

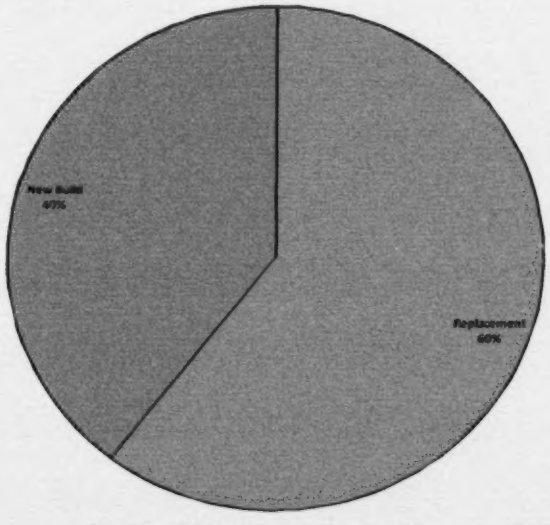


Chart 8b: Heating Appliance Rebates Replacement/New Build

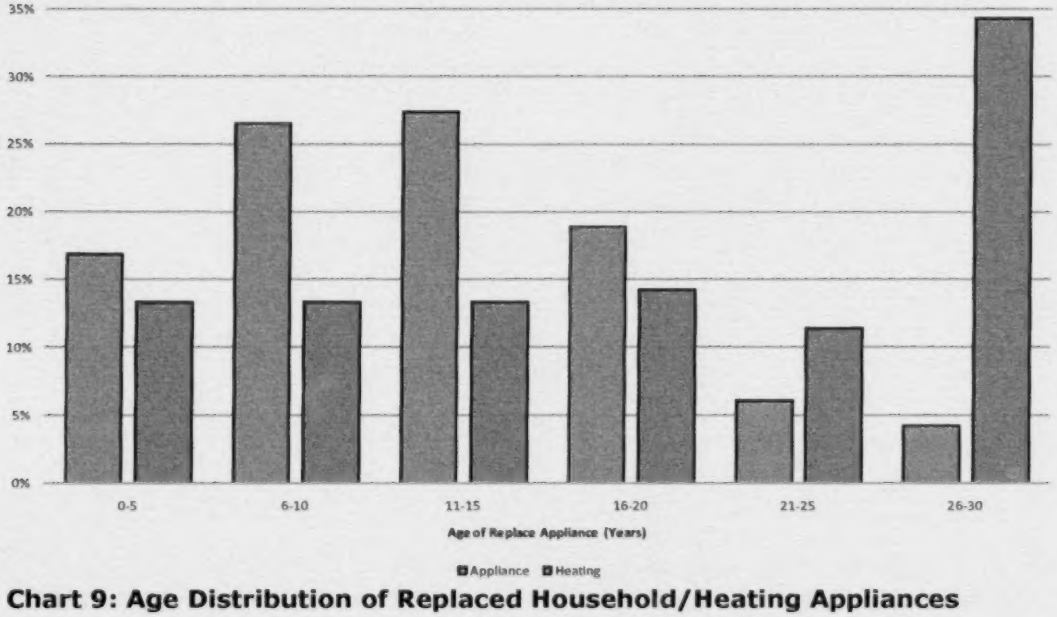


Chart 9: Age Distribution of Replaced Household/Heating Appliances

Of those applicants participating in the rebate program 73% were replacing an older household appliance, and 60% where replacing an older heating appliance.

Chart 9 (previous page) gives the age distribution of replaced heating and household appliances. This distribution shows that over 74% of heating appliances replaced by this program are more then 10 years old while 44% of household appliance replacements where less than 10 years old.

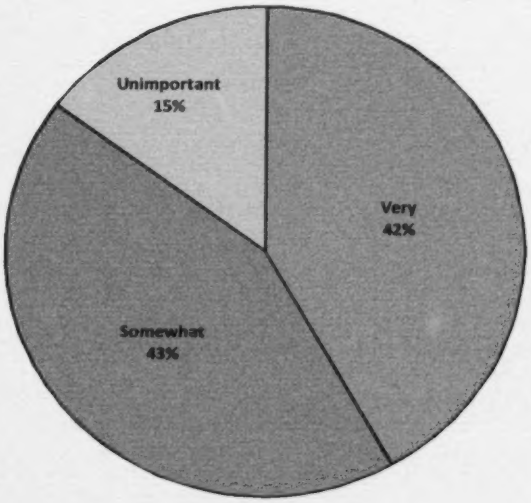
7. IMPORTANCE OF REBATE PROGRAM

Each program applicant is asked to rate the importance of the rebate program in their decision to purchase an energy efficient, *Good Energy* certified product. In 2009/2010, 85% of applicants stated that the rebate program was "either somewhat or very important" to their purchase choice. This was a slight increase from 81% in 2008/2009 and 75% in 2007/2008.

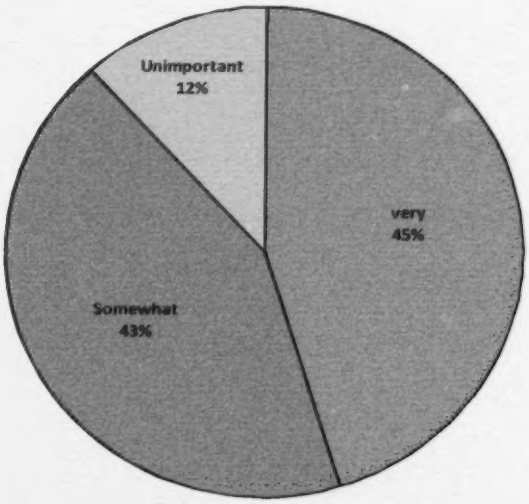
A total of 42% of applicants stated that the rebate program was "very important", which is the same percentage as the previous year.

As in previous years the level of importance ascribed to the rebate program in the consumer's decision process seemed to also be very dependent on the type of product being purchased. 88% of household appliance rebate applicants said the program was "very or somewhat important", with 45% stating that it was "very important". 79% of outboard motor applicants said the program was "very or somewhat important" and 42% said it was "very important". Heating appliance numbers showed slightly lower responses, with the "very and somewhat important" total percentage at 77% and the "very important" at only 29%. The lower percentage of relative importance ascribed to the rebate program for Boat Motors and Heating appliances is likely a result of the high percentage of these products that meet the Energy Star(R)/*Good Energy* criteria. For this reason these criteria will be re-evaluated prior to setting the efficiency thresholds for rebate eligibility in next year's program.

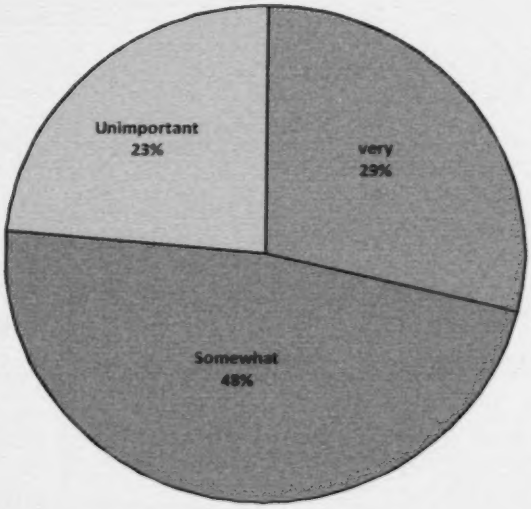
Chart 8: Applicant Response to "How important is the rebate program in your purchase choice?"



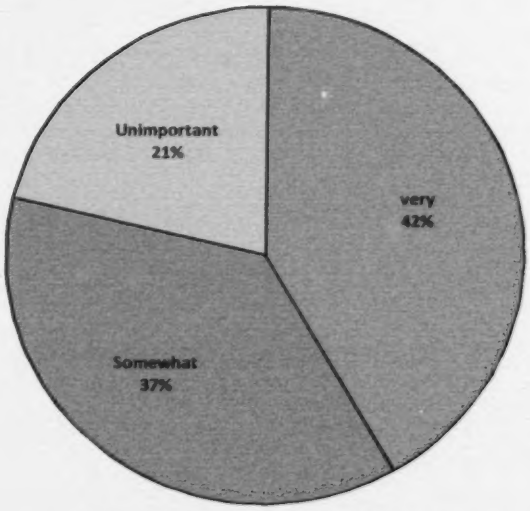
10a: All Applications



10b: Home Appliance Applications



10c: Heating System Applications



10c: Boat Motor Applications

8. MARKETING EFFECTIVENESS

Over the course of the 2009/2010 *Good Energy* Program, the marketing costs totalled $27,025.53. This includes radio and newspaper advertising, development and printing of application forms, in-store signage and product tags.

In order to improve future program development and marketing efforts, applicants were asked where they first heard about the program. As shown in Chart 11 below, the majority of applicants first heard about the program in the store in which the product was purchased, with word of mouth being the second most effective medium of providing the information. Newspaper ads, websites and radio ads were also effective marketing tools.

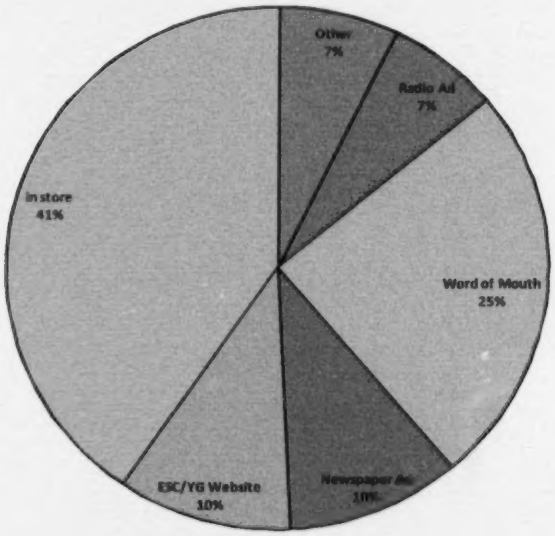


Chart 11: How Applicants Heard About the Program

The Good Energy program webpage listed on the ESC website average 157 visits per month during the course of the program with a total of 1,887 visits.

Month	# of Visits
April-09	195
May-09	124
June-09	126
July-09	181
August-09	173
September-09	171
October-09	166
November-09	157
December-09	142
January-10	189
February-10	120
March-10	143
Total	**1887**

Table 2: 2009/2010 Monthly Good Energy Website visits

9. FAMILIARITY WITH ENERGY STAR®

One of the key objectives of this program is to educate the public on the benefits of considering energy efficiency when making purchasing decisions. Energy Star® and Energuide® are key tools to help Canadian consumers make informed purchasing decisions.

As part of the rebate program all applicants are asked about their level of familiarity with the Energy Star® brand. As shown in Chart 12 below, the majority of applicants stated that they were somewhat or very familiar with Energy Star®. The number of applicants stating that they were unfamiliar with Energy Star® has increased slightly from the 2008/2009 program to this year going from 13% to 16%.

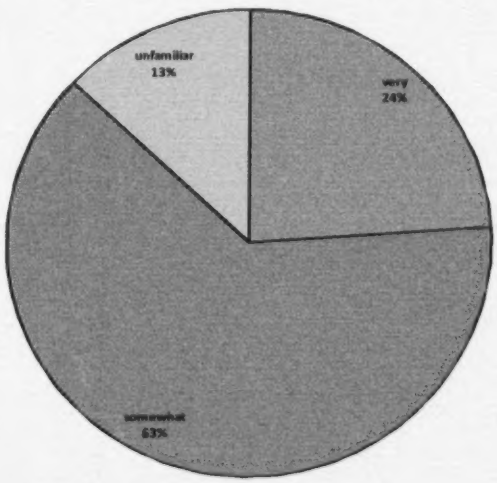


Chart 12a: 2008/2009 Familiarity with **Energy Star®**

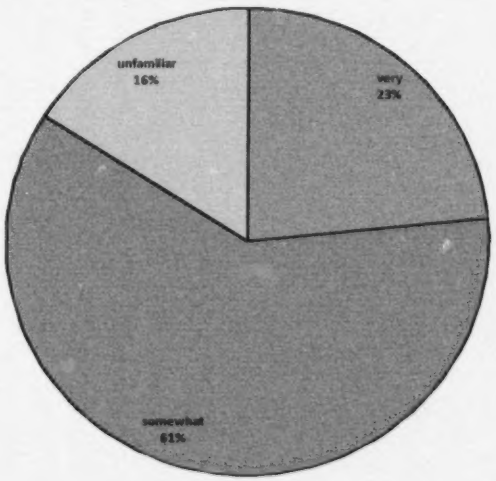


Chart 12b: 2009/2010 Familiarity with **Energy Star®**

10. CONCLUSION

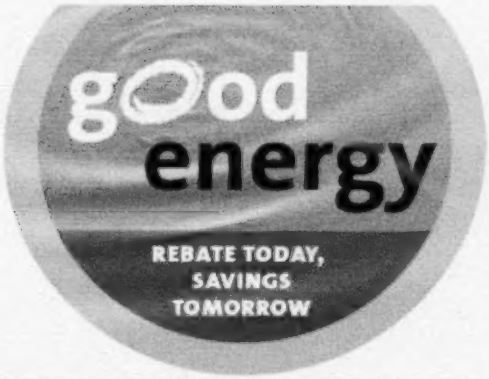
Adopting the use of best-in-class energy efficient appliances is a practical way to reduce energy and water consumption, thereby helping to reduce greenhouse gas emissions and both electrical and municipal utility infrastructure costs in the Yukon.

The Good Energy program is intended not only to highlight the benefits of new technology to the public and to provide savings immediately, but also to act as a catalyst for additional behavioural changes on the part of Yukon consumers. We anticipate that the program will result in consumers becoming more aware of the benefits of this technology which will help lead to further sales of these energy efficient products. Although it is difficult to calculate with any degree of accuracy the benefit of this "after effect", there will undoubtedly be additional benefits that will result from the program in terms of lowering consumer electrical bills, reducing overall demand on the system, and reducing greenhouse gas emissions.

The Good Energy program clearly illustrates that there is a high level of public interest in realizing the long-term economic and environmental benefits that result from choosing best-in-class consumer energy technologies.

Appendix A: 2009/2010 *Good Energy* Program Terms and Conditions

YUKON HEATING APPLIANCE REBATE APPLICATION



Please mail or deliver your completed, signed application form with a copy of your proof of purchase, EnerGuide card*, and inspection report* to:

Yukon Energy Solutions Centre, EMR-206
206A Lowe Street
Box 2703, Whitehorse, Yukon Y1A 2C6

CONTACT INFORMATION *(please print clearly)*

name _____
first name middle name last name

mailing address _____
apt./street city/town postal code

installation address *if different* _____
apt./street city/town postal code

phone _____ email _____

I give consent to the Energy Solutions Centre to investigate my claim by confirming my information with the vendor. I certify that I have read and understood the terms and conditions on the back of this form, that the noted appliance is an eligible heating appliance and has been installed at the above address.

Signature _____ Date _____

The Energy Solutions Centre reserves the right to conduct field inspections to verify appliance installation and compliance.

PURCHASE INFORMATION

Please ensure your proof of purchase includes the correct information.
Failure to do so will result in return of application.

Heating Appliance Brand _____ Model name/no. _____ Price _____

This program applies to the following heating appliances:

- **$250 Rebate** for oil furnaces for mobile homes with 80.0% AFUE or better*
- **$300 Rebate** for the purchase of a new: EPA qualified woodstove/furnace; EPA white tag rated wood boiler; or ULC rated wood pellet stove/furnace/boiler *
- **$300 Rebate** for oil monitor with 85% or greater efficiency
- **$300 Rebate** for the purchase of an oil furnace or boiler with 85% efficiency or a propane furnace/boiler with 90% efficiency*
- **$500 Rebate** for the purchase of a new Energy Star qualified oil furnace with 90% efficiency, propane furnace or boiler with 92% efficiency*
- **$300 Rebate** for the purchase of a new heat recovery ventilator
- **$500 Rebate** for the purchase of a CSA approved solar domestic hot water heating system.
- **$500 Rebate** for eligible** residential drain water heat recovery systems

* Please note that a copy of the safety inspection report is required along with your application for all furnaces and boiler, woodstoves, and wood pellet stoves.

** The list of eligible residential drain water heating recovery systems can be found online at www.esc.gov.yk.ca or by contacting the Energy Solutions Centre

Please fill out the survey questions on the back.

OLD APPLIANCE INFORMATION

Are you replacing an old heating appliance? ☐ yes ☐ no

If yes, brand _____ Model name/no. _____

Approximately how many years have you owned your appliance?

☐ 0-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30

How will the old appliance be recycled?

☐ picked up upon delivery ☐ taken to local landfill/metal recycler ☐ other _____

SURVEY QUESTIONS

1. How did you first hear about the Yukon Heating Appliance Rebate Program? Choose one.
   - ☐ Radio Ad
   - ☐ Newspaper Ad
   - ☐ Newspaper article
   - ☐ Yukon Government website
   - ☐ Energy Solutions Centre website
   - ☐ Word of mouth
   - ☐ In-store promotion/salesperson
   - ☐ Radio Interview
   - ☐ Other
2. How important was the rebate in your decision to purchase an energy efficient qualified heating appliance?
   - ☐ Very important
   - ☐ Somewhat important
   - ☐ Unimportant
3. What are your top three reasons for purchasing an energy efficient qualified heating appliance instead of a standard heating system?
   - ____ This rebate program
   - ____ Appearance
   - ____ Better performance
   - ____ Environmental benefits *such as energy conservation*
   - ____ Saving money on utility bills
   - ____ Other _____
4. How familiar were you with ENERGY STAR® qualified products prior to participating in this program?
   - ☐ Very familiar
   - ☐ Somewhat familiar
   - ☐ Unfamiliar
   - ☐ Would like more information

HOW THE REBATE WORKS

1. Purchase a new qualified heating appliance between April 1, 2009 and February 28, 2010. Note; this program is subject to budget availability.
   - A list of eligible appliances (along with the programs application form) is available at your local retail outlet or online at www.esc.gov.yk.ca.
2. Complete the Application Form and attach a copy of the Sales Receipt, along with the EnerGuide card and inspection report (if applicable).
   - Ensure the sales receipt (proof of purchase) clearly indicates 'payment in full', the amount paid, the date of purchase, and the make and model of the appliance.
   - Ensure that the name on the invoice matches the name on the rebate application.
3. Mail or deliver the application form, a copy of the sales receipt and inspection report to the Energy Solutions Centre.
   - All rebate application and sales receipt must be received by March 15, 2010.
   - The Energy Solutions Centre is not responsible for lost, late, incomplete or ineligible submissions.
   - Please allow eight weeks for delivery of your rebate cheque.

Information is collected in accordance with section 29 of the ATIPP Act and is being collected to satisfy the requirements of the Good Energy Program.

QUESTIONS

If you have questions about the program, contact the Energy Solutions Centre at (867)393-7063, or toll free at 1-800-661-0408, ext. 7063.

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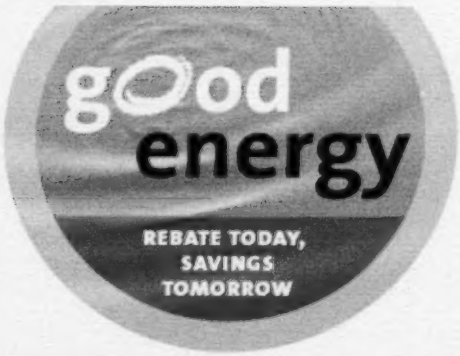
Energy, Mines and Resources

YUKON APPLIANCE REBATE APPLICATION



Please mail or deliver your completed, signed application form with a copy of your proof of purchase, and EnerGuide card clearly showing ENERGY STAR® qualification, to:

Yukon Energy Solutions Centre, EMR-206
206A Lowe Street
Box 2703, Whitehorse, Yukon Y1A 2C6

CONTACT INFORMATION *(please print clearly)*

name _____
first name middle name last name

mailing address _____
apt./street city/town postal code

installation address *if different* _____
apt./street city/town postal code

phone _____ email _____

I give consent to the Energy Solutions Centre to investigate my claim by confirming my information with the vendor. I certify that I have read and understood the terms and conditions on the back of this form, that the noted appliance is an eligible ENERGY STAR® appliance and has been installed at the above address.

Signature _____ Date _____

The Energy Solutions Centre reserves the right to conduct field inspections to verify appliance installation and compliance.

REBATE INFORMATION *(please check all applicable rebates)*

$100 Rebate for the purchase of a new ENERGY STAR® qualified refrigerator, clothes washer, dishwasher, and/or freezer installed in Yukon Communities powered by hydroelectricity.

- ☐ Refrigerator
- ☐ Front-Load Washer
- ☐ Dishwasher
- ☐ Freezer

$200 Rebate for the purchase of a new ENERGY STAR® qualified refrigerator, clothes washer, dishwasher, and/or freezer installed in Yukon diesel-powered communities.*

- ☐ Refrigerator
- ☐ Clothes Washer
- ☐ Dishwasher
- ☐ Freezer

**Yukon's Diesel-powered communities are: Beaver Creek, Burwash Landing, Destruction Bay, Old Crow, Upper Liard and Watson Lake.*

PURCHASE INFORMATION
Please ensure your proof of purchase includes the correct information.
Failure to do so will result in return of application.

New Appliance Brand _____ Model number _____

OLD APPLIANCE INFORMATION

Are you replacing an old appliance? ☐ yes ☐ no

If yes, brand _____ Model number *if known* _____

Approximately how many years have you owned your appliance?

☐ 0-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30

How will the old appliance be recycled?

☐ picked up upon delivery ☐ taken to local landfill/metal recycler ☐ other _____

SURVEY QUESTIONS

1. How did you hear about the Yukon Energy Star® Appliance Rebate Program? Choose one.

   - ☐ Radio Ad
   - ☐ Newspaper Ad
   - ☐ Newspaper article
   - ☐ Yukon Government website
   - ☐ Energy Solutions Centre website
   - ☐ Word of mouth
   - ☐ In-store promotion/salesperson
   - ☐ Radio interview
   - ☐ Other

2. How important was the rebate in your decision to purchase an ENERGY STAR® qualified appliance?

   - ☐ Very important
   - ☐ Somewhat important
   - ☐ Unimportant

3. What are your top three reasons for purchasing an ENERGY STAR® qualified appliance instead of a standard refrigerator, clothes washer, dishwasher, or freezer? Indicate order of importance.

   - ____This rebate program
   - ____Appearance
   - ____Better performance
   - ____Environmental benefits *such as water and energy conservation*
   - ____Saving money on utility bills
   - ____Other_____

4. How familiar were you with ENERGY STAR® products prior to participating in this program?

   - ☐ Very familiar
   - ☐ Somewhat familiar
   - ☐ Unfamiliar
   - ☐ Would like more information

HOW THE REBATE WORKS *(terms and conditions)*

1. Purchase an Energy Star® appliance between April 1, 2009 and February 28, 2010. Note: appliances purchased outside of the program dates are not eligible for a rebate; this program is subject to budget availability.
   - The rebate is for the following new Energy Star® qualified appliances: refrigerators, clothes washers, dishwashers, and freezers.
   - A list of eligible appliances (along with the programs application form) is available at your local retail outlet or online at www.esc.gov.yk.ca.
2. Complete this Application Form and attach a copy of the Sales Receipt, along with the EnerGuide card that came with your appliance.
   - Ensure the sales receipt (proof of purchase) clearly indicates 'payment in full', the amount paid, the date of purchase, and the make and model of the appliance.
   - Ensure that the name on the invoice matches the name on the rebate application.
3. Mail or deliver the application form, a copy of the sales receipt and EnerGuide card to the Energy Solutions Centre.
   - All rebate application and sales receipt must be received by March 15, 2010.
   - The Energy Solutions Centre is not responsible for lost, late, incomplete or ineligible submissions.
   - Please allow eight weeks for delivery of your rebate cheque.

Information is collected in accordance with section 29 of the ATIPP Act and is being collected to satisfy the requirements of the Good Energy Program.

QUESTIONS

If you have questions about the program, contact the Energy Solutions Centre at (867)393-7063, or toll free at 1-800-661-0408, ext. 7063.

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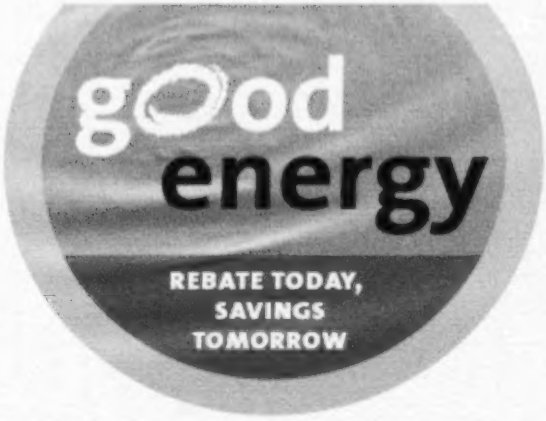
BOAT MOTOR REBATE APPLICATION



Please mail or deliver your completed, signed application form with a copy of your proof of purchase to:

Yukon Energy Solutions Centre, EMR-206
206A Lowe Street
Box 2703, Whitehorse, Yukon Y1A 2C6

CONTACT INFORMATION *(please print clearly)*

name _____
first name middle name last name

mailing address _____
apt./street city/town postal code

motor location address *if different* _____
apt./street city/town postal code

phone _____ email _____

I give consent to the Energy Solutions Centre to investigate my claim by confirming my information with the vendor. I certify that I have read and understood the terms and conditions on the back of this form, that the noted boat motor is CARB 3 star rated equipment and resides at the above address.

Signature _____ Date _____

The Energy Solutions Centre reserves the right to conduct field inspections to verify transportation compliance.

PURCHASE INFORMATION

Please ensure your proof of purchase includes the correct information.
Failure to do so will result in return of application.

New Boat Motor Brand _____ Model name/no. _____ Equipment sales price _____

This program applies to the following equipment:

$250 Rebate for boat motors with less than 30hp.

$500 Rebate for boat motors with 30hp or greater.

Outboard motors must meet California Air Resources Board (CARB) 3 star rating.

OLD BOAT MOTOR INFORMATION

Are you replacing an old boat motor? *(check one)* ☐ yes ☐ no

If yes, brand _____ Model name/no. _____ Year _____

How many hours do you estimate you use this item in a year? _____

Approximately how many years have you owned your boat motor?

☐ 0-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 21-25 ☐ 26-30

Please fill out the survey questions on the back.

SURVEY QUESTIONS

1. How did you hear about the Yukon Boat Motor Rebate Program? Choose one.

   - ☐ Radio Ad
   - ☐ Newspaper Ad
   - ☐ Newspaper article
   - ☐ Yukon Government website
   - ☐ Energy Solutions Centre website
   - ☐ Word of mouth
   - ☐ In-store promotion/salesperson
   - ☐ Radio Interview
   - ☐ Other

2. How important was the rebate in your decision to purchase a CARB 3 rated boat motor?

   - ☐ Very important
   - ☐ Somewhat important
   - ☐ Unimportant

3. What are your top three reasons for purchasing a qualified boat motor instead of a standard model?

   - ____ This rebate program
   - ____ Appearance
   - ____ Better performance
   - ____ Environmental benefits *such as energy conservation*
   - ____ Saving money
   - ____ Other _____

4. How familiar were you with energy efficient products prior to participating in this program?

   - ☐ Very familiar
   - ☐ Somewhat familiar
   - ☐ Unfamiliar
   - ☐ Would like more information

HOW THE REBATE WORKS

1. Purchase a CARB 3 star rated boat motor between April 1, 2009 and February 28, 2010. Note; Boat Motors purchased outside of the program dates will not be eligible for a rebate; this program is subject to budget availability.
   - A list of eligible boat motors (along with the program's application form) is available at your local retail outlet or online at www.esc.gov.yk.ca.
2. Complete the Application Form and attach a copy of the Sales Receipt.
   - Ensure the sales receipt (proof of purchase) clearly indicates 'payment in full', the amount paid, the date of purchase, and the make and model of the appliance.
   - Ensure that the name on the invoice matches the name on the rebate application.
3. Mail or deliver the application form, a copy of the sales receipt, EnerGuide card and inspection report to the Energy Solutions Centre.
   - All rebate application and sales receipt must be received by March 15, 2010.
   - The Energy Solutions Centre is not responsible for lost, late, incomplete or ineligible submissions.
   - Please allow eight weeks for delivery of your rebate cheque.

Information is collected in accordance with section 29 of the ATIPP Act and is being collected to satisfy the requirements of the Good Energy Program.

QUESTIONS

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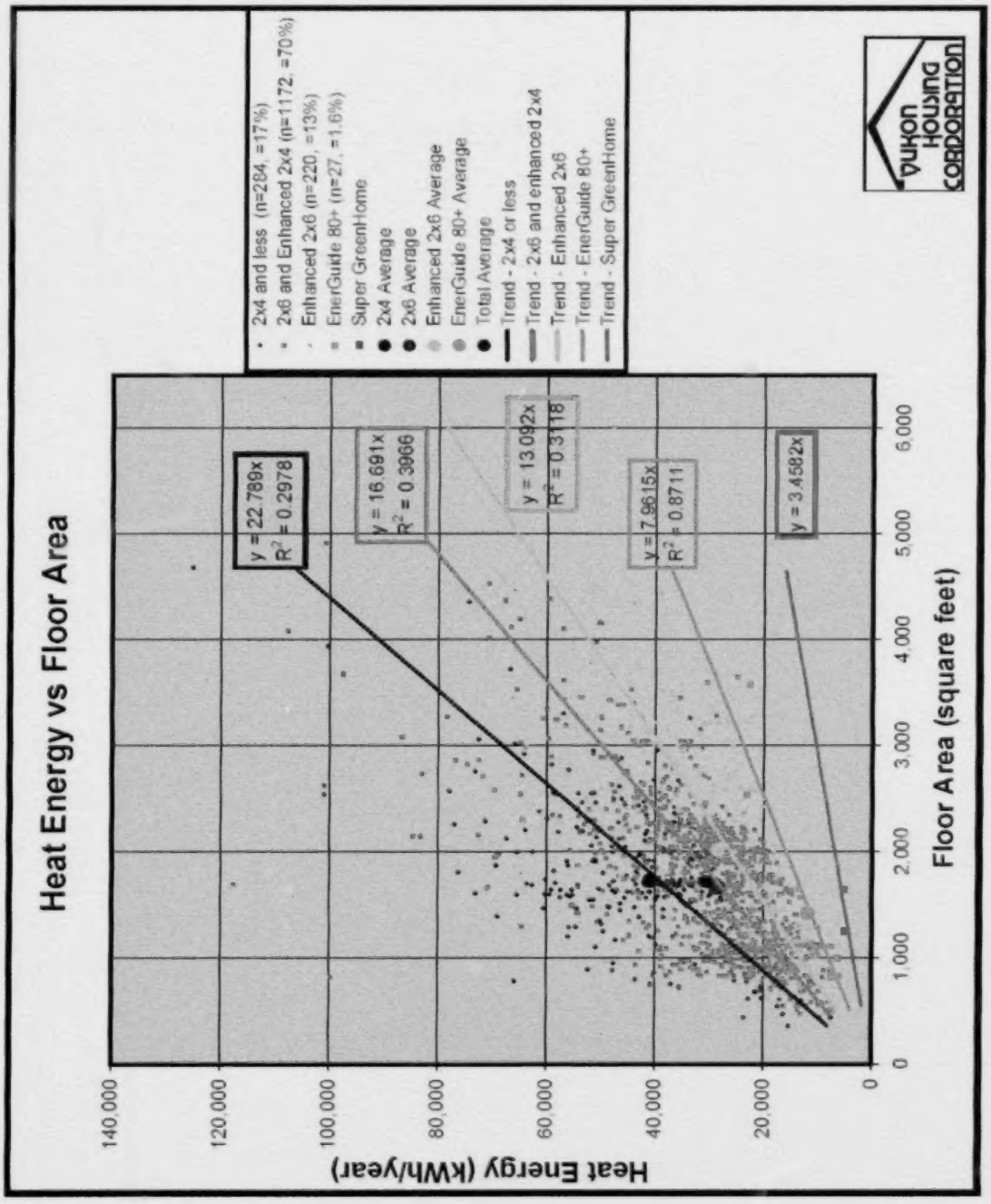
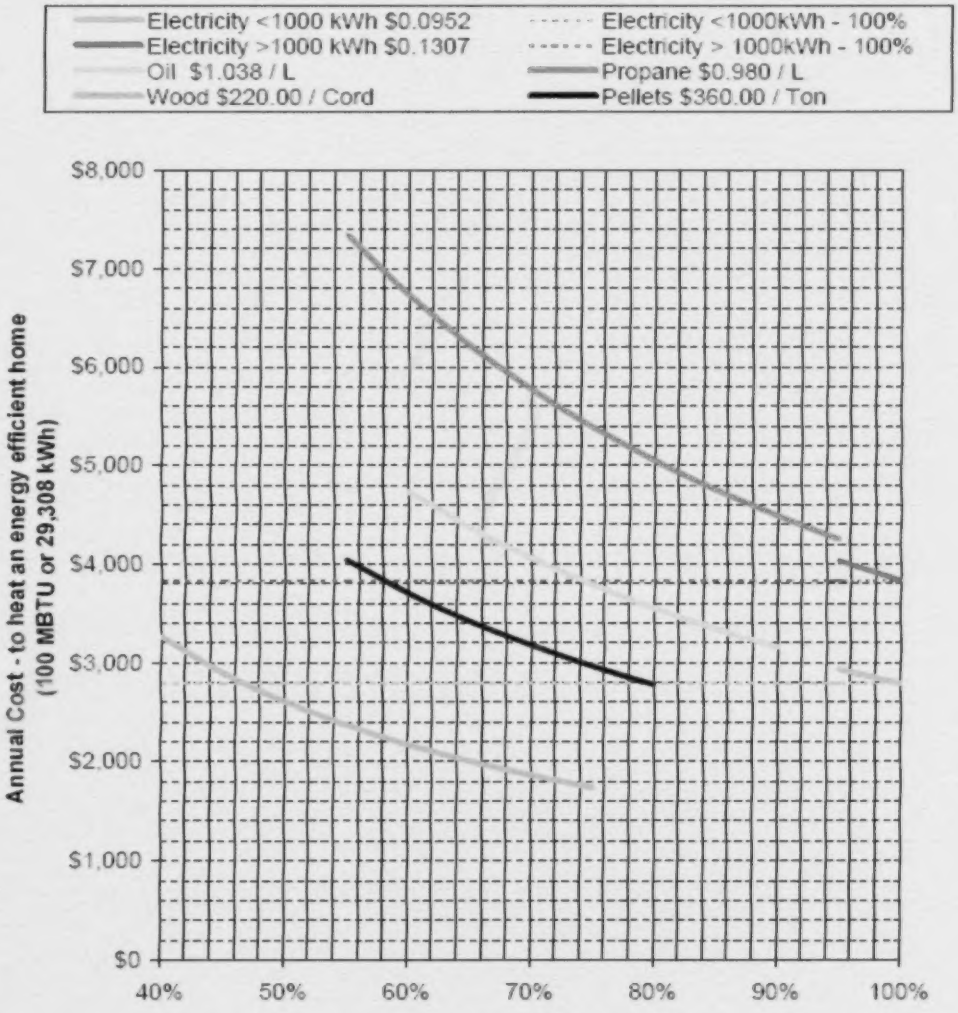
Appendix B: Yukon Housing Corporation: Heat Energy vs. Floor Area and Heating Appliance Efficiency Charts


Heat Energy vs Floor Area
Heat Energy (kWh/year)
Floor Area (square feet)
0
20,000
40,000
60,000
80,000
100,000
120,000
140,000
0
1,000
2,000
3,000
4,000
5,000
6,000
y = 22.789x
R² = 0.2978
y = 16.691x
R² = 0.3966
y = 13.092x
R² = 0.3118
y = 7.9615x
R² = 0.8711
y = 3.4582x
2x4 and less (n=284, =17%)
2x6 and Enhanced 2x4 (n=1172, =70%)
Enhanced 2x6 (n=220, =13%)
EnerGuide 80+ (n=27, =1.6%)
Super GreenHome
2x4 Average
2x6 Average
Enhanced 2x6 Average
EnerGuide 80+ Average
Total Average
Trend - 2x4 or less
Trend - 2x6 and enhanced 2x4
Trend - Enhanced 2x6
Trend - EnerGuide 80+
Trend - Super GreenHome
YUKON HOUSING CORPORATION

Home Heating Costs vs.
Heating Appliance Efficiency
Jan 27, 2010 Fuel Prices



YUKON HOUSING CORPORATION